

JAN - 6 2005

510 (k) Summary

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## Exhibit #1 510(K) SUMMARY

This summary of 510(k) safety and effectiveness information is being submitted in accordance with the requirements of SMDA 1990 and 21 CFR § 807.92.

The assigned 510(k) number is: K043348

### Submitter:

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Nanshan, Shenzhen, 518057, P. R. China

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- **Contact Person:**

Li Dongling  
Shenzhen Mindray Bio-medical Electronics Co., LTD  
Mindray Building, Keji 12th Road South, Hi-tech Industrial Park,  
Nanshan, Shenzhen, 518057, P. R. China

- **Date Prepared:**

November 15, 2004

### Name of the device:

- **Trade/Proprietary Name:** PM-8000 Patient Monitor (ECG Cables and Leadwires for the PM-8000 Patient Monitor)

- **Common Name:** Patient Monitor

- **Classification**

21 CFR 870.2300	Cardiac monitor (including cardiometer and rate alarm)	Class II
21 CFR 870.1130	Non-Invasive blood pressure measurement System	Class II
21 CFR 870.1110	Blood pressure computer	Class II
21 CFR 880.2910	Clinical Electronic Thermometer – Temperature Monitor with Probe	Class II
21 CFR 870.2700	Oximeter, Pulse	Class II

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## **Legally Marketed Predicate Device:**

K032733      PM-8000 Patient Monitor

## **Description:**

The PM-8000 Patient Monitor is a battery or line-powered patient monitor. The PM-8000 Patient Monitor acquires the physiological signals such as ECG, respiration (RESP), non-invasive blood pressure (NIBP), Saturation of Pulse Oxygen (SpO<sub>2</sub>), temperature (TEMP) and invasive pressure (IBP). These physiological signals are converted into digital data and processed. The PM-8000 Patient Monitor examines the data for alarm conditions and presents them on the color TFT display.

The optional built-in recorder provides hard copies of all digital data and waveforms as well as Tabular and Graphic Trend Information.

## **Statement of intended Use:**

The PM-8000 Patient Monitor is a vital signs monitor used on a human patient. The target populations are adult, pediatric and neonatal patients. The PM-8000 Patient Monitor has many features and functions, yet is easy to use through an integral keypad, knob and an intuitive menu system.

The patient parameters that can be monitored by PM-8000 are: ECG (3-lead or 5-lead selectable), Heart Rate derived from selected source (SpO<sub>2</sub>, ECG), Respiration Rate (derived from ECG), Non-invasive blood pressure (NIBP), Saturation of Pulse Oxygen (SpO<sub>2</sub>), Temperature (TEMP) and Invasive pressure (IBP). Its design allows the operator to adjust the settings of parameter alarms that audibly and visually notify the operator when an excursion occurs.

The PM-8000 Patient Monitor is intended for use in a health care facility setting. It is intended for use by qualified medical personnel trained in the use of the equipment.

The PM-8000 Patient Monitor is not recommended for use in a patient's home or residence, during the patient transport, or when it has not been ordered by a physician.

## **Comparison of Technological Characteristics:**

The PM-8000 Patient Monitor employs the same functional technology as the predicate device.

## Test Summary:

The device modification involved the addition of Shenzhen Mindray ECG cables and leadwires for the PM-8000 Patient Monitor. The purpose of adding these 6 new ECG cables and lead wires is a business decision. The subject 6 new ECG cables and lead wires are selectable by customers; we will not discontinue marketing the previously cleared ECG cables and lead wires.

Laboratory testing was conducted to validate and verify that the PM-8000 Patient Monitor met all design specifications and was substantially equivalent to predicate device.

The following quality assurance measures were applied to the development of the device:

- Risk Analysis
- Electrical Safety Testing
- Function and Performance Testing
- Environmental Testing
- Clinical Testing

## Conclusion:

The conclusions drawn from clinical and laboratory testing of the PM-8000 Patient Monitor (ECG Cables and Leadwires for the PM-8000 Patient Monitor) demonstrates that the device is as safe, as effective, and performs as well as the predicate device.



Food and Drug Administration  
9200 Corporate Boulevard  
Rockville MD 20850

JAN - 6 2005

Shenzhen Mindray Bio-Medical Electronics Co., Ltd.  
c/o Ms. Susan D. Goldstein-Falk  
mdi Consultants, Inc.  
55 Northern Boulevard, Suite 200  
Great Neck, NY 11021

Re: K043348

Trade/Device Name: PM-8000 Patient Monitor  
Regulation Number: 21 CFR 870.2300  
Regulation Name: Physiological Patient Monitor  
Regulatory Class: Class II  
Product Code: MWI  
Dated: November 15, 2004  
Received: December 6, 2004

Dear Ms. Goldstein-Falk:

We have reviewed your Section 510(k) premarket notification of intent to market the device referenced above and have determined the device is substantially equivalent (for the indications for use stated in the enclosure) to legally marketed predicate devices marketed in interstate commerce prior to May 28, 1976, the enactment date of the Medical Device Amendments, or to devices that have been reclassified in accordance with the provisions of the Federal Food, Drug, and Cosmetic Act (Act) that do not require approval of a premarket approval application (PMA). You may, therefore, market the device, subject to the general controls provisions of the Act. The general controls provisions of the Act include requirements for annual registration, listing of devices, good manufacturing practice, labeling, and prohibitions against misbranding and adulteration.

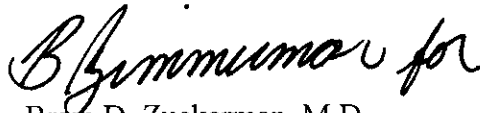
If your device is classified (see above) into either class II (Special Controls) or class III (PMA), it may be subject to such additional controls. Existing major regulations affecting your device can be found in the Code of Federal Regulations, Title 21, Parts 800 to 898. In addition, FDA may publish further announcements concerning your device in the Federal Register.

Please be advised that FDA's issuance of a substantial equivalence determination does not mean that FDA has made a determination that your device complies with other requirements of the Act or any Federal statutes and regulations administered by other Federal agencies. You must comply with all the Act's requirements, including, but not limited to: registration and listing (21 CFR Part 807); labeling (21 CFR Part 801); good manufacturing practice requirements as set forth in the quality systems (QS) regulation (21 CFR Part 820); and if applicable, the electronic product radiation control provisions (Sections 531-542 of the Act); 21 CFR 1000-1050.

This letter will allow you to begin marketing your device as described in your Section 510(k) premarket notification. The FDA finding of substantial equivalence of your device to a legally marketed predicate device results in a classification for your device and thus, permits your device to proceed to the market.

If you desire specific advice for your device on our labeling regulation (21 CFR Part 801), please contact the Office of Compliance at (301) 594-4648. Also, please note the regulation entitled, "Misbranding by reference to premarket notification" (21CFR Part 807.97). You may obtain other general information on your responsibilities under the Act from the Division of Small Manufacturers, International and Consumer Assistance at its toll-free number (800) 638-2041 or (301) 443-6597 or at its Internet address <http://www.fda.gov/cdrh/dsma/dsmamain.html>

Sincerely yours,

A handwritten signature in black ink, appearing to read "B. Zuckerman for".

Brian D. Zuckerman, M.D.

Director

Division of Cardiovascular Devices

Office of Device Evaluation

Center for Devices and

Radiological Health

Enclosure

510(k) Number (if known): K043348Device Name: **PM-8000 Patient Monitor****Indications For Use:**

The PM-8000 Patient Monitor is a vital signs monitor used on human patients. The target populations are adult, pediatric and neonatal patients. The PM-8000 Patient Monitor has many features and functions, yet is easy to use through an integrated keypad, knob and an intuitive menu system.

The patient parameters that can be monitored by the PM-8000 Patient Monitor are: ECG (3-lead or 5-lead selectable), Heart Rate derived from selected source (SPO2, ECG), Respiration Rate (derived from ECG), Non-Invasive Blood Pressure (NIBP), Saturation of Pulse Oxygen (SpO2), Temperature (TEMP) and invasive pressure (IBP). Its design allows the operator to adjust the settings of parameter alarms that audibly and visually notify the operator when an excursion occurs.

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Prescription Use   X  Over-The Counter Use       

(Per 21 CFR 801 Subpart D)

OR

(21 CFT 807 Subpart C)

(PLEASE DO NOT WRITE BELOW THIS LINE-CONTINUE ON ANOTHER PAGE IF NEEDED)

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Concurrence of CDRH, Office of Device Evaluation (ODE)

*Diana R. Lockner*  
(Division Sign-Off)  
Division of Cardiovascular Devices

510(k) Number K043348